



Northwest Energy Efficient Manufactured Housing Program



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Northwest Energy Efficient Manufactured Housing Program



Executive Summary

The Northwest Energy Efficient Manufactured Housing Program (NEEM) is approaching twenty years of building energy efficient manufactured homes in the Pacific Northwest. From an initial study program in the 1980's, to a utility rebate program and the MHAP program in the 1990's, to the industry financed effort program of today, the regions manufacturers have built over 100,000 certified efficient homes.

The efficiency programs have evolved. Thermal shell construction methods are proven. The program requires ENERGY STAR appliances installed at the manufacturing facilities. Improvements in monitoring the tightness of heating ducts are now standards of practice. An area that has escaped this evolution in the factory built home production and sales process is lighting.

Energy efficient lighting technology has improved in quality and performance, and also price. In the 1990's, the Oregon Department of Energy attempted various lighting projects, but cost and performance stopped progress. Installation of dedicated efficiency fixtures remains cost and availability prohibitive. The real opportunity exists in efficient bulbs. With recent NEEM program efforts extending to retail, the program saw the highest success of installation probability with the dealer. By creating confidence in performance, and affecting closing strategies and other feature/benefits, the retailer was in the best position to deliver efficient lighting savings.

But the real test is exhibiting proof - where they live - by installing efficient lighting in retailer lot models. The NEEM program recruited retailers from around the region, representing a variety of manufacturers, and asked for the opportunity to do complete lighting retrofits. We targeted retailers who leave their lights on most of the time. Several run their lights all the time.

The results are just now coming in. But the initial response and feedback is surprising. Savings were realized almost immediately. Given the hours the lights are on, the numbers are staggering. The light quality saw significant improvements in virtually all homes. One retailer commented the house was almost too bright. Customer comments were either none at all (isn't that the goal?) to "your homes are so bright!"

We are excited by the response of our retailer partners to the lighting pilot. They, in turn, are "seeing the light" each day they go to work. The pilot is having unexpected immediate impacts, with one retailer convincing its manufacturer to offer ENERGY STAR lighting options from the factory and another simply installing them in its customers home at set-up paying for the bulbs themselves.



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The Pilot Project Described

Recruitment: The pilot project recruited retailers in Oregon, Idaho, Montana, and Washington. We tried to link the retailers to manufacturers who “pioneered” and support the energy programs, hoping to capitalize on proven market value of energy efficiency. Our goal was two-fold; prove the light quality and savings are real, and make the case for future program opportunities upstream with manufacturers.

Retailers were selected in all climate zones, which was an important factor to compare temperature impacts and buying demographic influences toward efficient lighting.

Selection Protocol: With twenty years working in the industry, the protocol was linked to retailers and manufacturers who were early adopters on other program efforts. Knowing the owners and general managers, we could quickly identify desired locations. Knowing the manufacturers who built their homes, we were able to make the link back and gain support.

The pitch: Simple - provide us with lot models that you typically light a majority of the day (and night), allow us to remove every fixture that takes a qualifying bulb, and replace it with an ENERGY STAR bulb. The homes had to be “in rotation” and shown to customers regularly. We also asked to be aware of any comments, but not make issue of the lighting change unless it helped selling. (Most did mention participating in the pilot project - it did help with sales.) Our goal was to prove to them the light quality and energy performance was more than just talk.

Products: Manufactured housing is typical of most new homes built today. There are three basic bulbs used consistently - globe lights in bath vanities; recessed can lights in kitchens and hallways; and 65 to 75 light bulbs. The pilot project purchased ENERGY STAR qualifying replacement bulbs that could be found at most major home improvement stores.

Installation: NEEM met with each retailer and selected houses with the owner or GM. We wanted homes with a lot of lighting - big kitchens, large bath vanities, so that savings opportunities would be realized. The installation was straightforward; remove existing bulbs and replace with program bulbs, and keep an inventory of what bulb and wattage.

Retail Point of Sale: The pilot project provided high-resolution PDF production files of program signs designed to fit on counters either inside the demo homes themselves, or in the retailer sales office. The concept was for the change to ENERGY STAR lighting to be proven in the normal course of business. After consultation with retailers prior to the pilot launch, we offered minimal POS. We offered signage, but left it to the individual retailer.

All retailers produced the signs themselves and placed both in demonstration homes and the sales office.



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Program Retailers

(Retailer - Manufacturer - Retailer Location - GM/Owner contact)

Oregon

Emerald Lifestyle Homes - Skyline Homes - Eugene, Oregon - Gentry Johnson

Eugene Sales Center - Fuqua Homes - Eugene, Oregon - Jon Mingus

Sheridan Factory Outlet - Liberty Homes - Sheridan, Oregon - Mary Seward

Palm Harbor Village - Palm Harbor Homes - Woodburn, Oregon - Dave Conway

Palm Harbor Village - Palm Harbor Homes - Portland, Oregon

Western Living Homes - Homebuilders Northwest - Salem, Oregon - Larry Hultberg

Holton Creek Homes - Homebuilders Northwest - Medford, Oregon - Jeff & Lori Hawk

Horizon Home Center - Liberty Homes - Klamath Falls, Oregon

Northwest American Homes – Marlette Homes - Klamath Falls

Idaho

Homes Direct of Idaho - Kit Homebuilders Northwest - Nampa, Idaho

Montana

Homes of Montana - Kit Homebuilders Northwest - Missoula, Montana



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The “Installed” Numbers

Retailer	# of houses installed	11 watt ESTAR mini-twist	14 watt ESTAR Flood	vanity ESTAR 11 watt mini-globe
Emerald Lifestyle Homes	7	62	31	55
Eugene Home Sales Center	6	109	54	32
Sheridan Factory Outlet	2	24	45	24
Palm Harbor Village, Woodburn	11	94	51	60
Palm Harbor Village, Portland	2	13	12	9
Western Living Home Center	2	65	42	31
Holton Creek Homes	2	38	16	26
Horizon Home Center	2	10	21	27
Northwest American Homes	1	14	7	0
Homes Direct of Idaho	1	23	0	9
Homes of Montana	1	17	12	11
Total Installations	37	469	291	284

Doing the Math

ENERGY STAR qualifying mini-twist CFL's replaced 60 watt incandescent bulbs...

$$469 \times 60 \text{ watt incandescent bulbs} = 33,780 \text{ watts}$$

$$469 \times 11 \text{ watt mini-twist CFL} = 5,159 \text{ watts}$$

$$\text{Savings} = 28,621 \text{ watts}$$

ENERGY STAR qualifying recessed CFL flood lights replaced 75 watt recessed cans...

$$291 \times 75 \text{ watt recessed can bulbs} = 22,125 \text{ watts}$$

$$291 \times 14 \text{ watt recessed CFL's} = 4,074 \text{ watts}$$

$$\text{Savings} = 18,051 \text{ watts}$$

ENERGY STAR qualifying mini-globe CFL's replaced 40 watt vanity globe lights...

$$284 \times 40 \text{ watt vanity globe lights} = 11,360 \text{ watts}$$

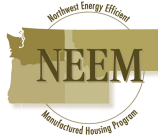
$$284 \times 11 \text{ watt mini-globe CFL's} = 3,124 \text{ watts}$$

$$\text{Savings} = 8,237 \text{ watts}$$

$$\text{Total Watts REMOVED} = 54,908 \text{ watts of SAVINGS}$$

$$54908 / 1,000 \times 24 \text{ hrs} = 1,317.79 \text{ kwh} \times 365 \text{ days} = 480,994 \times \$0.075 = \$36,074.56$$

(Assuming typical run time of 24 hrs per day per retailer. The savings represents lighting only, and does not include increased heating costs or decreased cooling costs).




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Point of Sale Marketing Outreach

As previously discussed, the pilot project focused on successful installations and letting the ENERGY STAR lighting sell itself. At the offer of counter signs, all retailers requested the PDF files and created signage themselves, which was discovered on follow-up visits. This allowed the project to focus funds to the purchase of bulbs and increase our installation opportunity.




ASK ABOUT
ENERGY STAR



ask your sales associate about making your home more energy efficient


www.northwestenergy.org

With support from:
 NORTHWEST ENERGY ALLIANCE
www.nwalliance.org

Homes Northwest &
ENERGY STAR Consumer Products

ENERGY STAR LIGHTING in MANUFACTURED HOMES

Lowers Your Energy Costs
Keeps Your Home **Cooler**
Provides **Great** Light



ENERGY STAR LIGHTING


a pilot project

Northwest Energy Efficient Manufactured Housing Program

Imagine saving 40% or more just by
changing your light bulbs!

Ask your sales associate about adding
ENERGY STAR Lighting to your new
certified **ENERGY STAR Home!**

Start Adding Up Your Savings!
(you might need a calculator...)



CHANGE FOR THE
BETTER WITH
ENERGY STAR

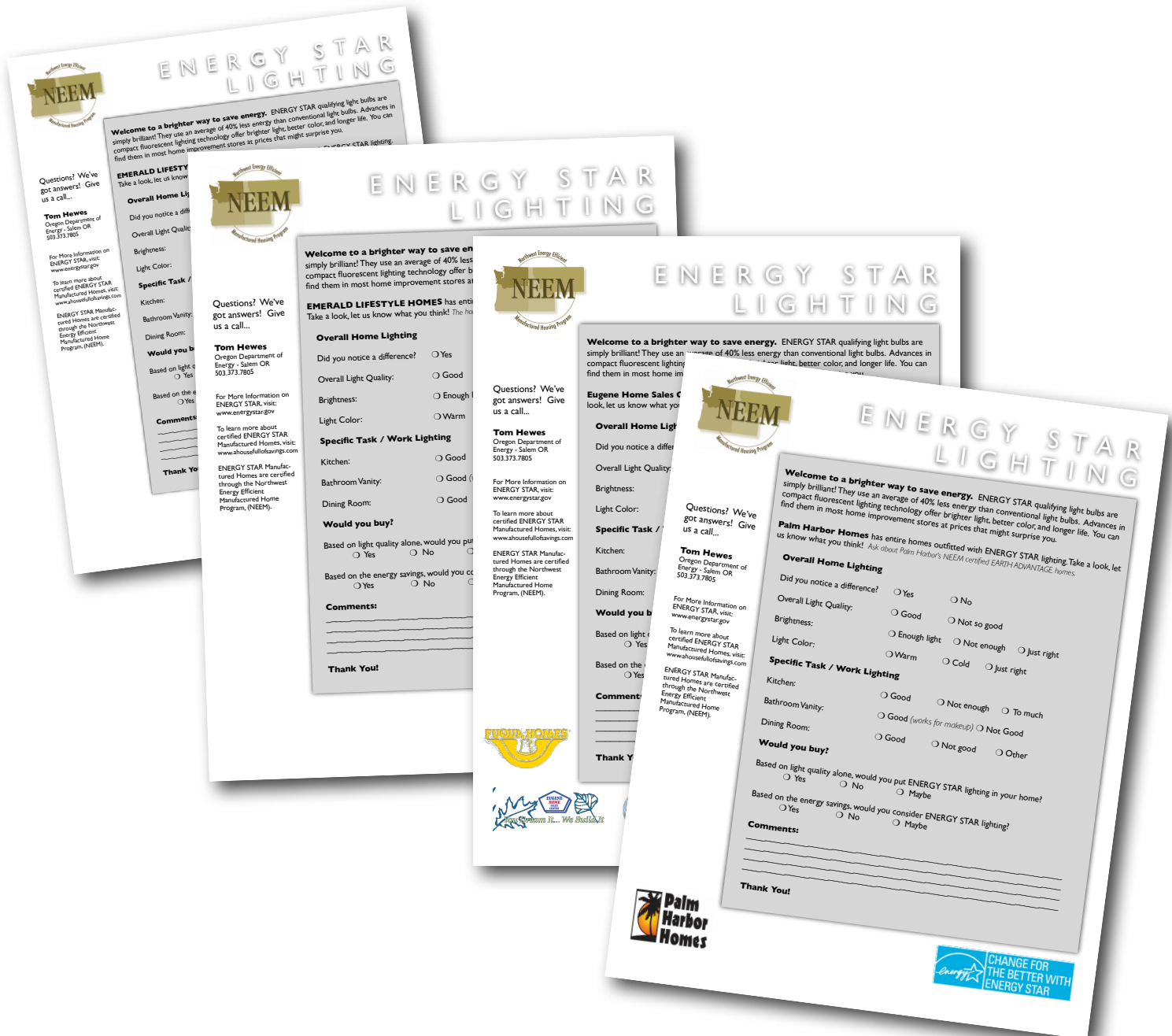


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What if there are questions?

The question arose early, “what if people ask questions,” or “how should we be thinking about with the new bulbs?” So, after talking with our retail partners, we developed a “program questionnaire” sheet, personalized with each retailer’s logo and name. This provided them with an organized, and surprisingly simple, way to observe themselves and customers walking through their homes.





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Conclusions

Surprising!

In a word, surprising would describe the conclusion of the pilot project. Having the experience of trying efficient lighting projects in the past combined with the increasing competition at retail for sales in a down climate, both the reception to participate and the reaction to the lighting installations was refreshing.

At first it was the realization of instant savings on utility bills. Almost all retailers participating in the pilot ran their lights 24/7 for security and assurance when a customer went in a display home it was well lit. The first call-backs were unanimously about the dramatic reduction in their utility costs. One retailer, who had us install one home first, called “volunteering” other display home because that one installation already reduced his utility bill \$150 a month.

The stories kept coming in. The only complaint was that homes in the winter were staying cold, “really bright but really cold.” We replied with the savings they could probably heat those homes while the retailer was open. The happily agreed!

One of our display homes was sold - with the lights at the insistence of the buying customer. Another retailer now offers ENERGY STAR lighting on every home they sell, as a gift to the customer. Yet another now offers it as an option at a “reduced price.” Perhaps the best story is the up-line reaction where a manufacturer now offers ENERGY STAR lighting installed at the factory - a regional first.

We expect a strong year for ENERGY STAR Lighting in manufactured housing. Already each manufacturer is positioning themselves, developing energy efficiency strategies they can employ at retail, setting their product off their competitor. Lighting will certainly factor now. Retailers have confidence in the product, comfortable with the cost and availability, and genuinely pleased with the quality.

Surprising! For a pilot, the impact will have significant rewards for manufactured housing in the Pacific Northwest.